

## **DEVELOPMENT TOOL FOR DEFINING ATTRIBUTES WITHIN A MULTI-DIMENSIONAL SPACE**

### **Abstract of the Invention**

Methods and systems for providing dynamic weather simulation in a computer gaming environment are disclosed. Weather may be user-specified, computer simulated, based on periodic updates of real-world weather conditions, or based on a pre-existing or user-created weather profile. A weather profile may include a data structure that stores weather over a location neutral geographical space, which may subsequently be applied dynamically to any selected geographical space in a simulated environment. To dynamically simulate weather while conserving computer resources, a weather simulation manager may periodically alter temperature and dew point values and determine whether to render or dissipate clouds based on the current temperature and dew point values. A weather profile creation utility may be used to quickly define weather attributes over a large terrain area, also providing visual feedback to the weather profile designer of defined weather attributes.